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SAP PM - PP Integration Planned Maintenance & Capacity Planning



beyhan_meyrali
Active Contributor

2021 Oct 06 8:08 AM



18 Kudos

18,563 Views

Hi,

Capacity planning is essential part of production planning. And for that we need to know availability of our work centers. Getting MRP results related to those work centers gives you idea about load of work you need to plan but we also need to pay attention to planned maintenances of those work centers. In order to make a realistic plan.

Thankfully SAP PM and PP can be linked organically to reflect planned maintenance orders to PP capacity plans. And SAP PP can feed SAP PM as well, as mentioned below.

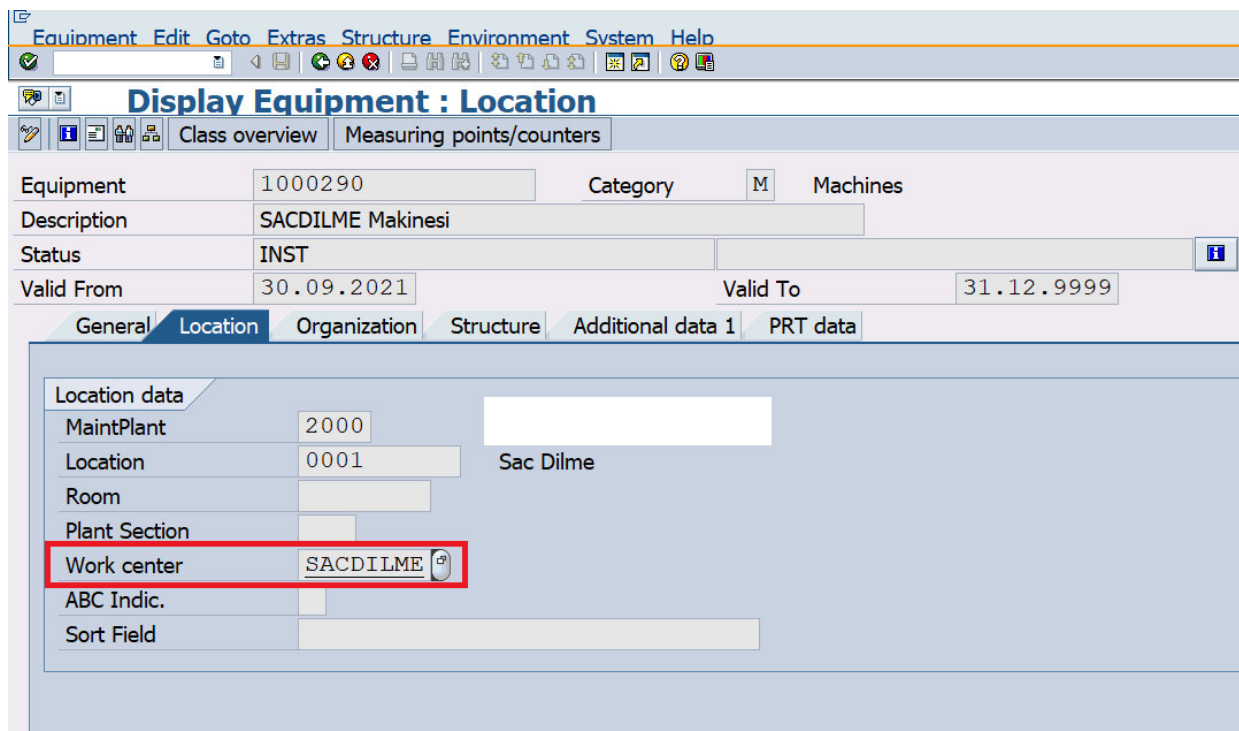
SAP PM and PP link can be created on two areas.

First, SAP PM Equipment/PRT(Production Resource / Tool(**IE01,IE25**)) & PP operations(**CA01,CA02**) can be linked to create measurement documents for measuring points of PRT equipment. By using measuring point you can create plans(**IP41**) and automatically schedule maintenance orders(**IP30**). For that [please check this SAP Blog Post](#) by Sandeep Praharaj.

And the second, which is also reason why I write this blog post, to make, SAP PM Maintenance to appear on **CM21/CM21** PP capacity planning. You need those following settings, if you want PM Order to be considered by capacity planning.

Please follow those steps below;

1- **IE01** -> Create an equipment and fill workcenter information. Workcenter should have capacity planning data "Relevant to Finite Scheduling" must be checked.



The screenshot shows the SAP 'Display Equipment: Location' screen. The top menu bar includes 'Equipment', 'Edit', 'Goto', 'Extras', 'Structure', 'Environment', 'System', and 'Help'. Below the menu is a toolbar with various icons. The main title is 'Display Equipment : Location'. Below the title are two tabs: 'Class overview' and 'Measuring points/counters'. The main data area contains the following fields:

| | | | | |
|-------------|-------------------|----------|------------|----------|
| Equipment | 1000290 | Category | M | Machines |
| Description | SACDILME Makinesi | | | |
| Status | INST | | | |
| Valid From | 30.09.2021 | Valid To | 31.12.9999 | |

Below the main data area are five tabs: 'General', 'Location', 'Organization', 'Structure', and 'Additional data 1'. The 'Location' tab is selected. It contains a sub-tab 'Location data' with the following fields:

| | | |
|---------------|----------|-----------|
| MaintPlant | 2000 | |
| Location | 0001 | Sac Dilme |
| Room | | |
| Plant Section | | |
| Work center | SACDILME | |
| ABC Indic. | | |
| Sort Field | | |

Check Capacity settings of Workcenter - Capacities Tab(Choose Machine) -> Capacity "Relevant to Finite Scheduling" setting.

Work center Edit Goto Extras System Help

Display Work Center: Capacity Overview

HR assignment Hierarchy

Plant 2000

Work center SACDILME

Basic Data Default Values Capacities Scheduling Costing Technology

Overview

| Capacity category | 001 | Machine |
|--------------------|--------|--------------------|
| Pooled capacity | | |
| Setup Formula | ZKMHAZ | Prod: Setup rqmts |
| Processing Formula | ZKMMAK | Prod.: Machine rqn |
| Teardown Formula | | |
| Other Formula | | |
| Distribution | | |
| Int. dist. key | | |

Control CapacityReduction

| | |
|-----------------|--|
| Formula-Related | |
| Formula-Related | |
| Formula-Related | |

| Capacity category | 002 | Person |
|--------------------|--------|--------------------|
| Pooled capacity | | |
| Setup Formula | ZKIHAZ | Prod: Setup rqmts |
| Processing Formula | ZKIISG | Prod.: Machine rqn |
| Teardown Formula | | |
| Other Formula | | |
| Distribution | | |
| Int. dist. key | | |

Control CapacityReduction

| | |
|-----------------|--|
| Formula-Related | |
| Formula-Related | |
| Formula-Related | |

Capacity Form. Formula Formula constnts ActCapReqmnts

Work center Edit Goto Extras System Help

Display Work Center Capacity: Header

Intervals and Shifts Intervals Available Capacity Profile Reference Available Capacity Short Texts

Plant 2000
Work center SACDILME
Capacity category 001

General data
Capacity Responsible 001 SAP example
Pooled capacity ☐ Grouping 01

Available capacity
Factory Calendar TR Turkey
Active Version 1 Normal available capacity
Capacity Base Unit MIN Minute

Standard available capacity
Start Time 00:00:00
End Time 24:00:00 Capacity Utilization 85
Length of breaks 00:00:00 No. Ind. Capacities 1
Operating time 20,40 Capacity 1.224,00 MIN

Planning details
Relevant to Finite Scheduling ☒ Overload 0 %
Can be used by several operations ☒ Long-term planning ☒

2- IW31 -> Create Maintenance Order for equipment and set System Condition to "0"

Order Edit Goto Extras Environment System Help

Display Maintenance order 4000564: Central Header

Order PM01 000564

Sys.Status REL MANC NMAT PRC SETC

HeaderData Operations Components Costs Partner Objects Additional Data Location Planning Control

Person responsible

PlannerGrp / 2000

Mn.wk.ctr TEST1 / 3000 Test İşyeri 1

Person respon... 0

Notifctn

Costs 0,00 TRY

PMActType 001 Inspection

SystCond. 0 not in operatio

Address

Dates

Bsc start 14.10.2021

Basic fin. 22.10.2021

Priority

Revision

Reference object

Func. Loc.

Equipment 1000290 SADCILME Makinesi

Assembly

First operation

Operation

WkCtr/Plnt TEST1 / 3000 Ctrl key PM01

Work durtn 48 H Number 1

Person. no 0

Calc. key Calculate duration

Acty Type

Oprtn dur. 48 H

PRT

Comp.

Please pay attention to;

- Maintenance order must be released
- Equipment work center is not related to order maintenance workcenter.
- Maintenance Order duration is considered in CM21 / CM25.

And now, you can check the capacity in **CM21** or **CM25** and you will see the maintenance order.

Great one beyhan.meyrali

Clearly articulated.

Major challenge is the PP Workcentre integration with PM Workcentre - clearly explained in above.

Vignesh V

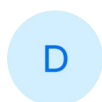


JiePeng Explorer

2022 Jul 13

7:04 PM

I try it in system follow , but I can't see maintance order in CM25, what's I need to to if want show in CM25?



deepak_d Explorer

2022 Dec 21

12:15 PM

Neat and precise explanation Beyhan.

But there is one point, I feel, should have been covered here - Dont we have to set the Indicator for 'Reservation by PM" against the system condition '0' in the configuration?

Please correct me if I am wrong:)

Regards

Deepak Doddagoudar



beyhan_meyrali Active Contributor

2022 Dec 22

5:43 AM

Hi Deepak,

Thanks for the comment. 😊 I am here to correct you.

System condition 0 is, by default, set to Reservation by PM. Unless somebody changed it.

The screenshot shows the SAP Change View 'Operating Condition': Overview. The table has three columns: SystemCondition, Operating condition, and Reservation by PM. The first row shows SystemCondition 0 with Operating condition 'not in operation' and a checked checkbox for Reservation by PM. The second row shows SystemCondition 1 with Operating condition 'in operation' and an unchecked checkbox for Reservation by PM.

| SystemCondition | Operating condition | Reservation by PM |
|-----------------|---------------------|-------------------------------------|
| 0 | not in operation | <input checked="" type="checkbox"/> |
| 1 | in operation | <input type="checkbox"/> |

Regards



deepak_d Explorer

2022 Dec 22

6:45 AM

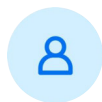
Hello there Beyhan:),

Ah ha... Thank you for correcting me.

Now I see why it is checked in my Client system.

Regards

Deepak



former_member811422 Explorer

2023 Jun 24
2:59 PM

Hi Beyhan,

This is a very interesting topic, and great insights provided by you.

I have a quick query, from plant maintenance perspective, can we perform capacity levelling utilizing FIORI apps?

As more clients are leaning, to only using Fiori apps, the functionalities of CM21 or CM25 which were used for capacity levelling by Plant maintenance users are no more available from Fiori perspective.

I am unable to find a suitable replacement from Fiori apps perspective.

The apps Manage work center capacity (F3289), capacity scheduling table, and capacity scheduling board cannot be used by PM, as we have to set 'Area of Responsibility' initially, which from plant maintenance perspective cannot be assigned.

Please provide your comments on the same. Or any suggestions to tackle the situation.

Regards

Venu



anandjain Discoverer

2023 Sep 23

9:50 AM

Hi Beyhan,

It was a good explanation,

Can you share me process where I can plan PRT as work center, and make capacity Planning accordingly to it also,

Case is:-

1. Let say I have one WC with Setup for 15 min and Process of 45 Min,
2. At the same WC we are using a PRT which will be used for 65 Min.(5 min extra for cleaning and indexing)
3. Also this PRT cannot be used more than 10 time, so life is max 650 minute of operation.
4. Also this PRT need to be procured.

Now I want to plan and schedule the work

Can you help me how to config this scenario.

Thanks,

Anand Jain



CesarSalazar Newcomer

2024 Jun 21

11:02 PM

Hello dear experts, thanks a lot for the well explanation. I have a doubt, if we have the maintenance order reflected in the CM21/25 capacity board, does PP team can be able to schedule a Process/Production order in the same date as the maintenance order or the maintenance order will prevent this?

Thanks in advance.

